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ABSTRACT

This teaching unit, Architects and Building, is one in a series of career guides developed by Project CHOICE (Children Have Options in Career Education) to provide the classroom teacher with a source of career-related activities linking third and fourth grade elementary classroom experiences with the world of work. Part of the Industrial and Construction Occupations Career Cluster, these ten lessons explore the role of the architect in the planning and construction of a building and skills necessary to become an effective architect. An introductory section gives the unit rationale, goals, performance objectives, entry-level assessment, and evaluation. A list of instructional materials, such as films, filmstrips, books, art supplies, and community resources, is included in this section. Each lesson contains a statement of purpose, materials needed for the lesson, an introductory statement, class activities, and a summary activity. Written materials (such as worksheets, surveys, and task cards) are included where feasible. (This guide is one of twenty-four in the series for grades 3 and 4--CE 025 766-789.) (MEK)

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ED188004

OFFICE OF CLAUDE W. RICHARDSON
KERN COUNTY SUPERINTENDENT OF SCHOOLS

Project CHOICE

#120

A CAREER EDUCATION UNIT FOR GRADES 3 AND 4

ARCHITECTS AND BUILDING
(Industrial and Construction Occupations Career Cluster)

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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CE025787

January, 1978

INDUSTRIAL AND CONSTRUCTION OCCUPATIONS
CAREER CLUSTER:

ARCHITECTS AND BUILDING

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INDUSTRIAL AND CONSTRUCTION OCCUPATIONS
CAREER CLUSTER:

ARCHITECTS AND BUILDING

TEACHER'S GUIDE

RATIONALE

Almost everywhere we go there are different kinds of buildings-skyscrapers, sports stadiums, libraries, houses, factories and schools. An architect was responsible for the planning and construction of these buildings. An architect's ideas about how to construct a building are influenced by the environment, the climate, the materials available, the needs of the client and how the people in that area live.

In this unit, an attempt is made to help the student become aware of the influence of architecture in their lives, the role of the architect in the planning and construction of a building, the importance of harmony between architecture and our environment and the skills needed by the architect to become effective in the field.

GOALS

Through this unit, the student will:

-Become aware of the services provided by the architect.

-Learn some of the terminology involved in the field of architecture.

-Gain an understanding of how architecture influences our environment.

-Learn that the early fundamentals of architectural design still influence construction today.

-Gain an appreciation for the beauty of our environment as enhanced by architecture and architectural planning.

PERFORMANCE OBJECTIVES

By the end of this unit, the students will be able to:

-List four skills necessary to be an architect.

-Describe how architecture is influenced by the environment, available materials and lifestyle of the people.

-Identify the role of the architect in building construction.

-Become aware of how architecture has developed through the ages.

-Be able to identify three different types of architectural designs.

ENTRY LEVEL ASSESSMENT
(To be used as a pre-test and a post-test.)

Use this informal inventory to determine class awareness of the field of architecture. Answers may be taped or written.

1. How does architecture influence our lives?

2. What services does an architect provide?

3. What other kinds of workers must an architect work with in order to complete the construction of a building?

4. How does the architect help to make our world a more beautiful place in which to live?

EVALUATION

The final lesson has been set aside for evaluation. The Entry Level Assessment may be used as a pretest as well as a post-test, or the teacher may wish to develop his/her own. Responses may be taped or written, so that comparisons may be made in order to determine how well pupils have achieved the objectives.

SUGGESTED INSTRUCTIONAL MATERIALS

The following materials and equipment may be used in this unit:

-Films and filmstrips as listed.
-Books as listed.
-Film and filmstrip projector.
-Tape recorder/player, tape.
-A variety of art materials.
-Magazines, newspapers.

Films:

Homes Around The World

Filmstrips:

Architecture and Your Life
Planning a Home
Merchant Princes
Building a Building
Man and the Cities

Books:

Dewey Number	Title	Author
721	What It Feels Like to Be a Building	Wilson
720	To Grandfather's House We Go	Devlin
720.973	The Architects	Fisher
722	The Buildings of Ancient Man	Leacroft
728	Houses	Adler
720.23	What Can She Be? An Architect	Goldreich
690	Young Scientist Looks ...	Barr
690	How a House Is Built	Beneson
690 & PR	Let's Go Watch a Building Go Up	Goodspeed
690	A Skyscraper Goes Up	Harman
690 & PR (P)	Your World: Let's Build a House	Pope
690	A Building On Your Street	Simon
RA	Little Stone House	Hader
CL2	Stevie Finds a Way	Lubers
CL3	The House on Grandfather's Hill	Woodward
RA	Hans and Peter	Petrides
728.8	Art and Industry of Sand Castles	Adkins
CL4	Secret Castle	Colver
726	Cathedral: The Story of It's Construction	Macauley Macauley
728	True Book of Houses	Carter
643	Houses Around the World	Floethe
728 & PR (P)	Homes Homes	Wonder Book
PR (U)	Homes Around the World	Jackson
301.5	Have You Seen Houses	Oppenheim
728	How We Get Our Shelter	Provus
728	Let's Find Out About Houses	Shapp
690	Building a Skyscraper	Iger

The teacher might like to select Art Prints showing unique buildings or homes (cathedrals, etc.).

AVAILABLE IN INSTRUCTIONAL RESOURCES CENTER (IRC): OFFICE OF THE KERN COUNTY SUPERINTENDENT OF SCHOOLS
(Please preview first, to be certain of suitability for specific students and situations.)

MP 2399 Movement to the Dream
MP 985 Architecture West
MP 2532 Adventures in Perception
MP 3187 Frank Lloyd Wright
MP 909 House
MP 6231 Medieval Architecture
MP 6428 Roman Wall
MP 6430 Rosary of the Missions

COMMUNITY RESOURCES

Dave Cartnel, Architect; Bakersfield; 832-8122
Mr. Mueller, Architectural Illustrators; Bakersfield; 324-4791

INFORMATION SHEET 1

BACKGROUND INFORMATION

Architecture is a science of "creative problem solving". The problems concern the physical and psychological needs of the user, legal and economic restrictions, and practical and aesthetic considerations. Finding a design solution that will meet all these needs is the challenge to the architect.

An architect does much more than draw. He/she makes presentations, discusses job with clients, agrees on a budget, follows the building code and co-ordinates and oversees the work of others.

There are many different places an architect can work. He/she can be employed by the government, institutions or corporations. He/she may work for a real estate or construction management firm. Some architects specialize in one type of building (such as hospitals or schools). Others teach Architecture, or combine practice and teaching.

To become an architect a student should prepare by taking courses in communication, mathematics, social studies and physics, while in high school. While in college, the architecture program is filled with design and technical courses.

Most architectural programs are a series of design classes, called studios. Each studio is harder than the one before. A student begins with a small individual building, working up to large scale multibuilding complexes.

Architectural students also study theories of heating and cooling, the history of architecture, basic design and graphics, freehand drawing, contract law, site and urban design and architectural materials.

The college program is a 5 year course culminating in a Bachelor of Architecture, or a 6 year course awarding a Master of Architecture degree.

Following the awarding of the college degree, an architect must complete a 3 year internship before he/she can take the Registration Exam and obtain licensure. The internship is required before taking the registration exam and gives the architect on-the-job training. The intern works with professionals in the field to strengthen their weaknesses and make decisions concerning their career.

INSTRUCTIONAL STRATEGY: Lessons 1 - 10

Lesson 1

PURPOSE

To give pre-test and entry level assessment, to familiarize students with the responsibilities of an architect and to sign architectural contracts.

MATERIALS

1. Book: What Can She Be? An Architect, by Gloria Goldreich.
2. Chart paper, felt pen.
3. Contract, next page.
4. Paper for scrapbook.
5. Scissors, paste, magazines.

INTRODUCTION

Say: "Today we are going to begin our new unit, about architects. First we shall see what we might already know about this subject, and then we will share this book about Susan Brody, a real architect."

CLASS ACTIVITIES

1. Take pre-test (Entry Level Assessment).
2. Read book. Have children list things which architects do.
3. Review and sign contracts.
4. Have students look through magazines and cut out pictures of different kind of architectural designs to paste in a scrapbook. Encourage students to bring pictures from home or draw pictures to add to their scrapbook.

SUMMARY

1. Share scrapbooks.
2. Review responsibilities of architects.

CONTRACT

You need:

- -paper
- -pencil
- -copy of this contract

This contract when signed, means I promise to complete the activities listed and will try to learn more about architecture and famous architects.

I _____ will:
(Print your name)

Make an Architecture/Architect Scrapbook.

In my scrapbook, I will include three (3) of the following:

1. 10 different pictures of buildings showing different architectural styles
2. Choose a famous architect and write a report on him/her
3. Draw or find 3 pictures of unusual buildings
4. Make neat, detailed plans for a 2 bedroom house
5. List 5 skills a person must have to be a good architect. Write a paragraph telling which of these skills you are beginning to learn now in school.

I choose to do: 1 2 3 4 5 (Circle three)

I agree to do my best with all my work, and to do it neatly.

Signed _____ (Student signature)

_____ (Teacher signature)

Date _____ 197__

Lesson 2

PURPOSE

To have the children meet a real architect who can personally describe the duties and skills involved in architecture and why he/she enjoys the work.

MATERIALS

1. Guest speaker (architect).
2. List of questions. (Children should prepare before hand, a list of questions.)

INTRODUCTION

Say: "In yesterday's lesson we read about Susan Brody, a real architect. From the story we learned about some of the various skills and responsibilities which make up Mrs. Brody's job. Today we will meet another architect in person! Our guest can explain more fully what his/her job requires."

CLASS ACTIVITIES

1. Listen to guest speaker.
2. Ask questions of guest speaker.

SUMMARY

Write thank you notes to the guest speaker. Have each child include in his/her note one thing learned from today's presentation.

Lesson 3

PURPOSE

To identify the other workers with whom the architect must cooperate in order to construct a building.

MATERIALS

1. The Young People's Guide to Home Building.*
2. Task card 3.
3. Manila paper, 12 x 18.
4. Crayons or felt pens.
5. Information Sheet 2, next page.

INTRODUCTION

Say: "We have learned that the architect is the coordinator of the building plans. He/she consults with the client, coming to an agreement on what the client needs. The architect is then responsible for completing that agreement by drawing up the plans of the structure and seeing that all the specifications are met. In order to do this, the architect needs to meet and discuss the plans with many people."

CLASS ACTIVITIES

1. Read The Young People's Guide to Home Building together. Emphasize pages 3, 4, 5, 30 and 31. Also note the pages where workers refer to architect's blueprint.
2. Give class additional information from Background Information Sheet 2. They may take notes on this material on page 32 of the booklet.
3. Construct worker wheel as suggested on task card 3.

SUMMARY

Have children share worker wheels with the class.

*To obtain this booklet for everyone in the class, write to: National Association of Home Builders, 1625 L St., N.W., Washington, D.C. 20036.

Note: An alternative activity would be to ask the guest speaker in Lesson 2 to talk about the architect's co-workers.

INFORMATION SHEET 2

ARCHITECT'S CO-WORKERS

Draftsman - draws blueprints

Building contractor - takes the plans and makes them work. Responsible for workers starting their part of building on time.

Project superintendent - head person of site contractor.

Electrician, Plumber, Mason, Cabinetmaker

Client - person or persons who hire the architect to plan, design and follow through on the building.

Building commission - follows all codes.

Civil engineer, surveyor - gives contour map of site at requested interval. New house. Soil test.

Structural engineer - large scale project. Designs foundations, roofs, walls as per architect's design. Puts together all the numbers.

Mechanical engineer - lays heating and cooling systems also on large projects.

Electrical engineer - receptacles, wires for lighting.

Plumbing engineer - plots pipes.

Landscape architect - designs grounds around the building to complement the building and the surroundings.

Lesson 4

PURPOSE

To identify various types of architectural design and how the designs are repeated in today's construction.

MATERIALS

1. Book: What It Feels Like to Be a Building, by Wilson.
2. Magazines and newspapers.
3. Architect scrapbook.
4. Information Sheet 3, next page (dittoed for class).
5. Pictures, books or films showing historical and contemporary architectural designs (See suggestions in these sections: Suggested Instructional Materials and Available from Instructional Resources Center, Superintendent of Schools.)

INTRODUCTION

Say: "The basic designs of architecture have remained in our buildings for thousands of years. Today we will identify some basic architectural designs from Ancient History to the present."

CLASS ACTIVITIES

1. Place Information Sheet 3 in scrapbooks. Read and discuss.
2. View pictures and films showing architectural designs. Indicate various parts of buildings and have children identify.
3. Distribute magazines and newspapers. Have children cut out pictures of old and/or new buildings. Label the parts of the building. Include these in Architectural Scrapbook.

SUMMARY

Before placing architectural designs in their scrapbook, have the children share what they have found with their classmates. This is a good place in the unit to review different architectural designs basic to today's buildings.

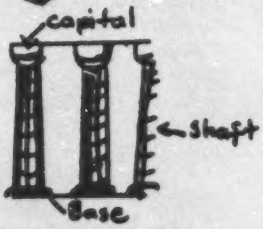
INFORMATION SHEET #3

BASIC ARCHITECTURAL DESIGNS

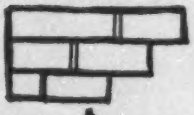
ARCH A structure, usually curved, made of wedge-shaped blocks, used to span an opening, supported only at the sides.

BUTTRESS A projecting structure to support and give stability to a wall or building.

BEAM A structure which carries its weight between walls to give the structure support.



COLUMN A type of supporting pillar. The three parts of a column are shaft, base and capital.



CORBEL A projection consisting of courses of stones or bricks, each extending slightly over the one below it.

DOME A spherical roof, placed like an inverted cup over a circular or square walls, a circle of arches.

FACADE The face or front of a building.

FLYING BUTTRESS An arch or number of arches resting against a firm buttress or pier to give added support and stability to a building.

GEODESIC A contemporary form of dome construction in which the tetrahedron is the basic geometric form.

Lesson 5

PURPOSE

To realize the beauty in architecture and how it makes our buildings more pleasant places to look at, work in and to live in.

MATERIALS

1. Suggested films: Architecture West #985
   House #909
   (For these and other suggested films, refer to section: Available from Instructional Resources Center, Superintendent of Schools.)

2. Film projector.

3. Arrangements for a walking field trip.*

INTRODUCTION

Say: "Today we will have a chance to see a selection of buildings in our city which show what a pleasant place buildings can be."

CLASS ACTIVITIES

1. View films. Discuss how buildings can add or detract from the beauty of the environments.

2. Take walking fieldtrip to see specific buildings. Elicit from children what makes these buildings unique. Draw conclusions about what architecture is.

SUMMARY

After returning to class have children reflect on the various buildings they saw and come to a consensus on "Why Architecture Makes Our City a More Pleasant Place to Live In."

*Note to teacher: Suggestions for a walking fieldtrip might be made by the guest speaker in Lesson 2.

WORKSHEET #1 (To be used with Lesson 6)

Skills and Traits of an Architect

Do you have what it takes to become an architect?

Put a [+] in the box next to the qualities you possess.

Make a [√] if you are not sure.

Make a [-] if you are su[illegible] you do not have that trait.

Personality Traits:

[ ] [illegible]bility to express self

[ ] enjoy working with people

[ ] willing to work and study hard

[ ] liking for details

Physical and Educational Skills:

[ ] able to draw well

[ ] good [illegible]ye sight

[ ] able to see things in 3 dimension

[ ] enjoy working with figures and numbers

[ ] an eye for beauty and proportion and design

[ ] like working with your hands

Lesson 7

PURPOSE

To realize how architecture is influenced by our environment, the materials available to the architect and the lifestyle of the people for whom the building is constructed.

MATERIALS

1. Pictures of various types of homes.
2. Pictures of various countries and geographical areas.
3. Manila paper, 8 x 11.
4. Pencils, crayons.

INTRODUCTION

Say: "Today we are going to investigate how architecture is influenced by the environment."

CLASS ACTIVITIES

1. View pictures of various types of homes.
2. Discuss types of homes people have in different areas and why (i.e. climate, materials available, skill of the people, way they live, etc.)
3. View pictures of various countries and areas. Have children give ideas of what types of homes would be appropriate in what areas.
4. Have children draw background (i.e. jungle, snow, city, island) and draw an appropriate house in that background.

SUMMARY

Today we learned how climate and environment influence architecture. Let's share our pictures and the buildings we drew. On our architecture bulletin board we can place all of our jungle buildings together, all of our city buildings together, all of our island buildings, etc.

Lesson 8

PURPOSE

To become aware of the services provided by the architect in our community.

MATERIALS

1. Book: What Can She Be? An Architect, by Goldreich.
2. Background Information Sheet 1.
3. Task cards.
4. Chart paper.
5. Felt pens.

INTRODUCTION

Say: "We learned from our visit by _____, that an architect does many more things besides drawing plans. Today we are going to investigate more carefully some of the other responsibilities of an architect."

CLASS ACTIVITIES

1. Read and discuss book.
2. Make a chart listing the duties of an architect.
3. Have children discover how all these duties relate. (The architect tries to make the public aware of the beauty of his/her environment and the need to protect and enhance that beauty.)
4. Do any task cards. Completed work to be included in scrapbook.

SUMMARY

We have seen today that the duties of an architect are varied. But all of these duties have one very important idea in common. Can we remember what that is? (To enhance and protect the environment.)

Lesson 9

PURPOSE

To follow the steps taken by the architect in the planning of a building. To afford the children an opportunity to evaluate what they feel is good architectural planning.

MATERIALS

1. Information Sheet 4, next page.
2. Chart paper, felt pen.
3. Blueprint of a building.
4. Pencil, ruler, graph paper, writing paper.

INTRODUCTION

Say: "Buildings today are very complicated structures. As we have seen buildings today start with the architect but involve many more people before it is completed. In order for all these people to do their job properly the architect draws very accurate plans. Today we will have a chance to draw a plan of our house and tell if we feel it is the best plan for our family."

CLASS ACTIVITIES

1. Discuss with children, concepts from Information Sheet #4.
2. On chart paper have children list steps an architect follows in planning a house.
3. Discuss how an architect might try to keep the natural beauty of an area by providing a simple yet functional building for a client.
4. Have children draw the floor plan of their house and/or apartment. Then write down what they like or dislike about the plans. Some children might like to provide suggestions for improvement.

SUMMARY

Children may share their floor plans and tell the things they like and dislike.

INFORMATION SHEET #4

STEPS TO BUILDING A HOUSE

1. Discuss building with client. Analyze what the building should have (i.e. closets, sinks, windows).

2. Requests topographic survey - soil test to evaluate earthquake conditions, spot, and size nearby trees, assess view and type of natural surroundings. Writes environmental impact study.

3. Design floor plan. How are the spaces related? How will the house be used? How can it complement the natural surroundings? It is here the architect must also consider the position of the building in relation to the sun (Where will windows go?), the climate of the area, what kinds of energy will be used to heat or cool the house. And how can the house blend into the area- be a good neighbor.

4. Plans exterior elevations. Must be co-ordinated with the interior yet reflect the style and beauty of the existing neighborhood.

5. Draws simple blueprint. Also a blueprint of house in cross-section.

6. Draws blow up areas of building, this enables craftsmen to visualize how roof, walls and ducts are to be constructed.

7. Writes specifications. "The How to Fit the Puzzle Together." Each engineer writes his own. The architect checks to prevent any conflicts.

8. Now the job goes out to bid. Interested contractors receive the drawings and estimate how much it will cost them to construct the buildings. The lowest bidder usually wins and works with the architect to completion of the building. The architect is responsible for the contractor building the structure according to specifications.

Lesson 10

PURPOSE	To enable the students to assess their knowledge of architects and their work.
MATERIALS	1. Tape from Lesson 1, if recorded. 2. Entry Level Assessment. 3. Task cards.
INTRODUCTION	Say: "Today we are going to see what we have learned about architects and their work. We are going to listen to the tape we made the first day to see what new things we have learned."
CLASS ACTIVITIES	1. Listen to tape or look at pre-test. 2. Make new tape or complete post-tests. 3. Free use of all task cards.
SUMMARY	The tape acts as a summary for the unit. During taping, children should feel free to express their opinions regarding this unit, describing what they might not have liked, as well as what they did like.

INFORMATION SHEET #5

EDUCATION REQUIRED TO BECOME A REGISTERED ARCHITECT

Bachelor of Arts with a major in Architecture. Student may then go into City Planning, Urban Development, Graphic Design or Illustration or a related field.

Masters of Architecture, B.A. and two post graduate years of more intensive training.

3 year internship (apprenticeship) necessary before student can take Registration Exam.

College Course of Study:

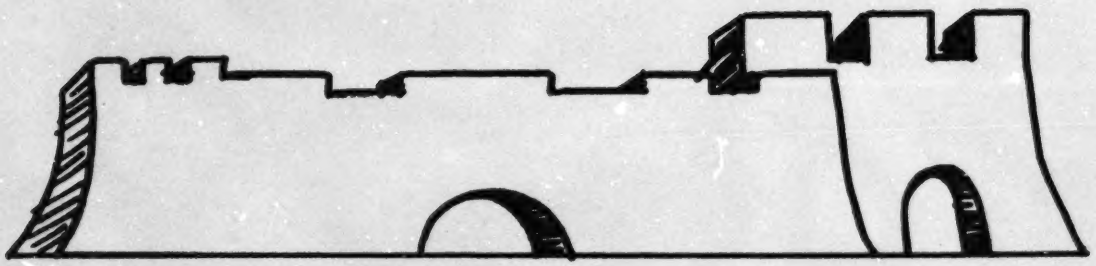
- -Elementary design
- -Art
- -Architectural history
- -Freehand drawing

- -Engineering and structure
- -Use of equipment
- -Systems and materials in building
- -Study of which materials and metals work together and complement each other

Post Graduate Study:

- -2 years of indepth study of design, structure, planning and history

BE AN ARCHITECT!!



You need:

-book: The Art and History of Sandcastles, Jan Adkins

-two or three friends

-the sand box at your school

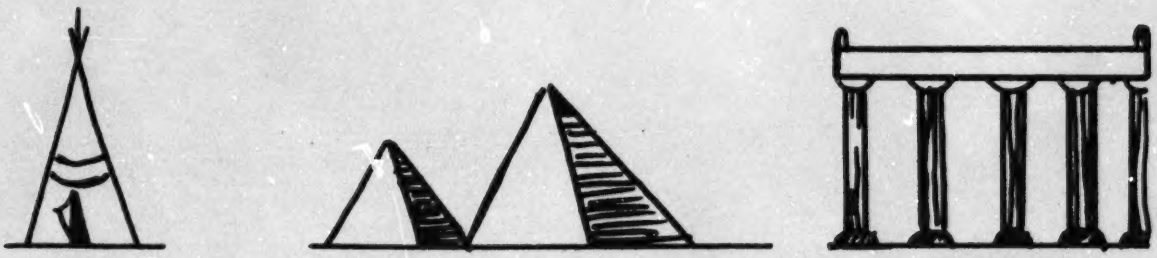
-spoons, buckets, cups, other things to mold the castle

Read the book, The Art and Industry of Sandcastles. Mr Adkins, the author feels that building sandcastles is a way of using your imagination and building your daydreams. He gives you all the background and instructions necessary to build a fantastic castle.

Carefully use Mr. Adkins suggestions and take your pail and shovel and friends to the sandbox. Build your castle being sure to make walls, turrets, moats and parapets (You will find out all about these in the book.).

Have fun and build a wonderful castle. You might even want to take a picture of your creation.

THE STORY OF ARCHITECTURE



You need:

-book: From Stones to Skyscrapers, Richard Bergere

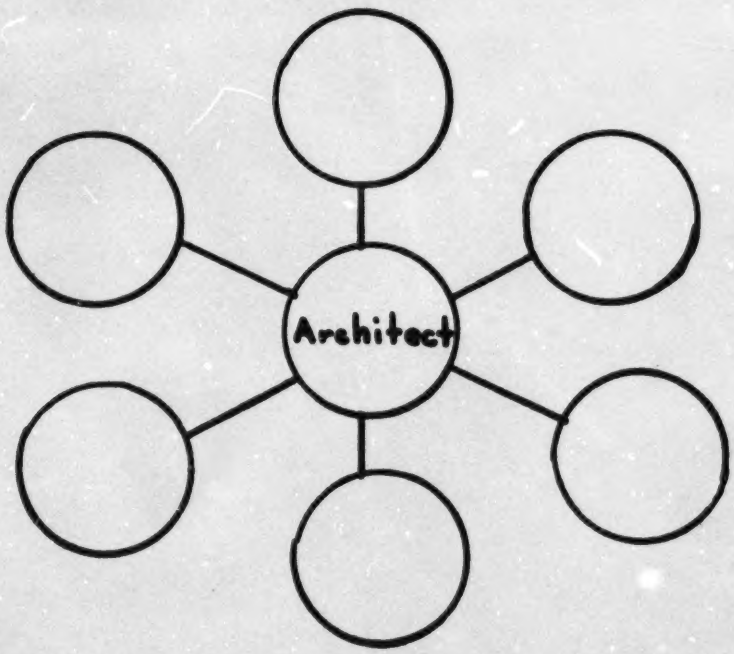
-drawing paper, 8 x 11 inches (10 sheets)

-writing paper, pencil, crayons

Read the book, From Stones to Skyscrapers by Thea and Richard Bergere. They will tell us about old and unusual buildings. They explain how these buildings developed through the ages, telling us the history of architecture.

After reading the book, make a scrapbook with the drawing and writing paper. Illustrate 10 of the buildings you find most interesting. Label them and write a paragraph describing each one.

WORKER WHEEL



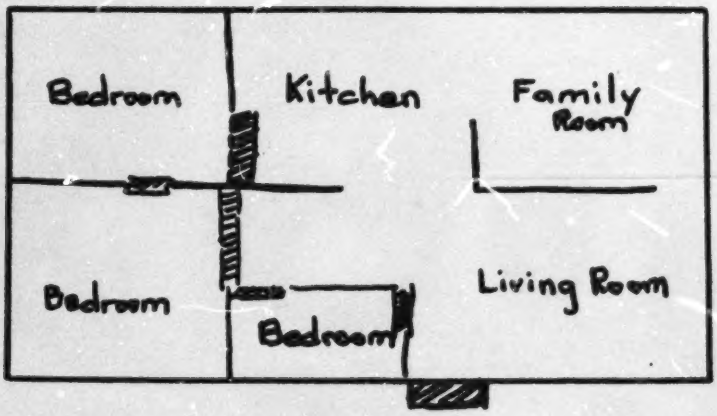
You need:

-a piece of manila paper, 12 x 18 inches
-felt pen or crayons
-ruler
-pencil

The architect is the central figure in the creation of a building. Not only does he design and plan the building, but he chooses the materials which make the building, and consults the many workers constructing the structure to make sure it is built as planned.

Place the architect in the center of your worker wheel. On each of the spokes name as many workers as you can with whom the architect works.

TRY YOUR HAND!!



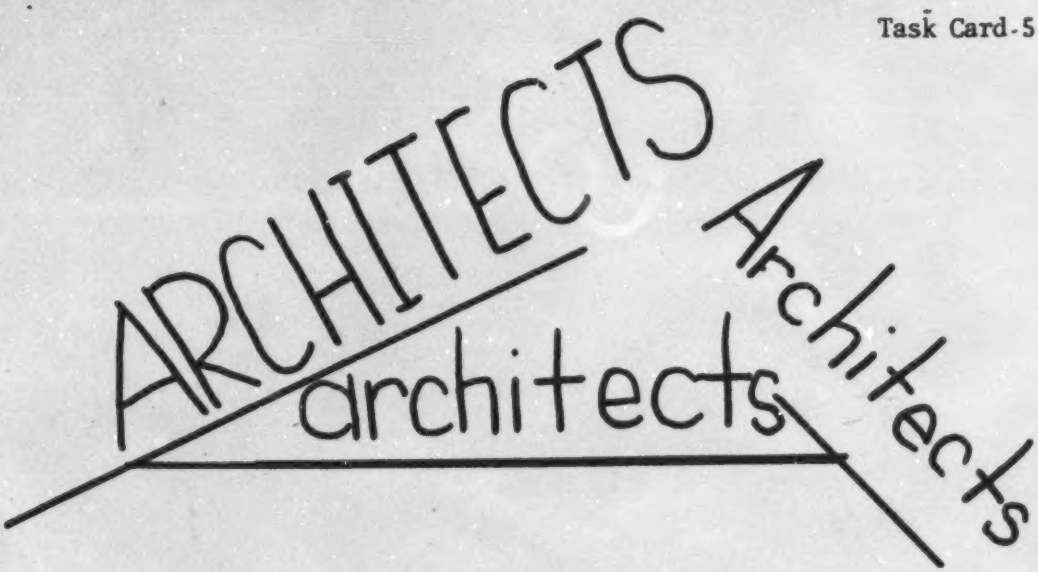
You need:

-manila paper, 12 x 18 inches
-ruler, protractor, compass
-pencil

Architects draw up plans for buildings. They plan the size of the rooms, the placement of windows, doors and closets. Architects use imagination and creativity in designing buildings.

This task card will give you a chance to design a building. It may be a house, library, sports arena, factory, hospital or airport. Think of all the facilities necessary to make these buildings liveable and workable (kitchens, bathrooms, ticket offices, training rooms, lounges). Be sure to include these rooms in your plan.

Share your architectural plan with the class or put it on the bulletin board for all to admire.



FAMOUS ARCHITECTS*

You need:

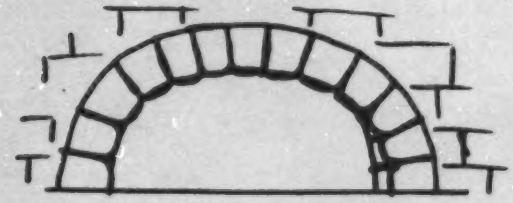
-paper
-pencil
-encyclopedia or book: The Architects, Leonard Fisher

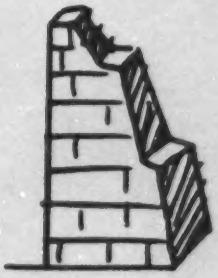
Look up one of the architects we have talked or read about. Find out all you can about the architect and write a report in your own words. Share your report with the class

Suggestions:

Thomas Jefferson
Frank Lloyd Wright
Mies van der Rohe
Le Corbusier

*To the teacher: You may wish to assign this task card ahead of time if there is a need to go to the library.





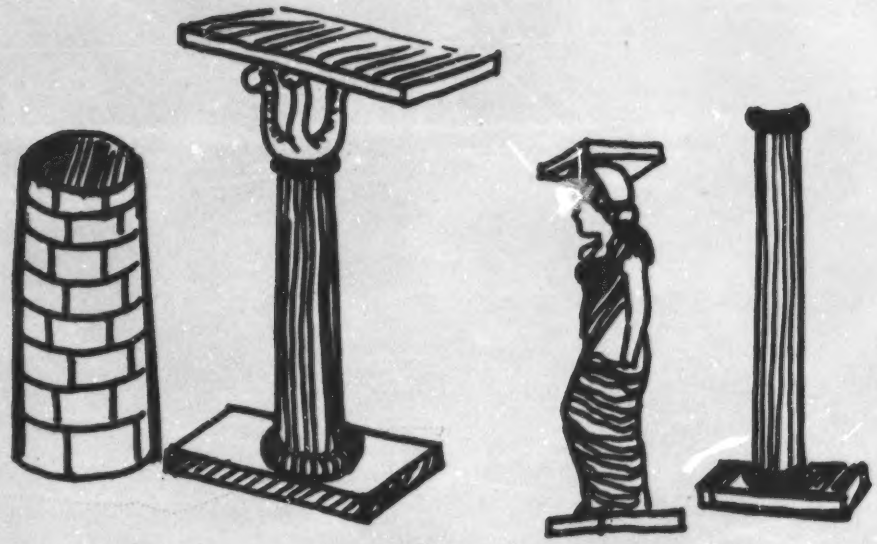
ARCHITECTURE IN MOTION

You need:

-a friend
-book: What It Feels Like to Be a Building, by Forrest Wilson
-acting skills

This task card will give you and a friend the chance to explain architecture, without using words. The class will have to know what the architectural designs are (as learned in Lesson 4). Your job will be to act out these structures.

Read What It Feels Like to Be a Building and using the illustrations as examples show the class what it is like to be a column, arch, beam or buttress.



HOW MANY DIFFERENT KINDS CAN YOU FIND?

You need:

-paper
-pencil
-books: The Buildings of Ancient Egypt, Richard and Helen Leacroft
The Buildings of Ancient Rome, Richard and Helen Leacroft
From Stones to Skyscrapers, Richard Bergere, pages 22-35
or encyclopedia
-magazines

Many of our buildings today are influenced by architecture of the past. The civilization of Rome and Egypt were especially responsible for the look of many of our buildings.

Do a little research into the architecture of Rome and Egypt using the books or encyclopedia. Look carefully at the different styles. Draw pictures of the different styles of columns and label each.

If possible, look through the magazines and see if you can find pictures of buildings using columns. They may be old or new buildings. Add these pictures to your scrapbook or start a new folder "Columns".

ARCHITECT'S SKILLS

Head	Hands
1.	1.
2.	2.
3.	3.
4.	4.

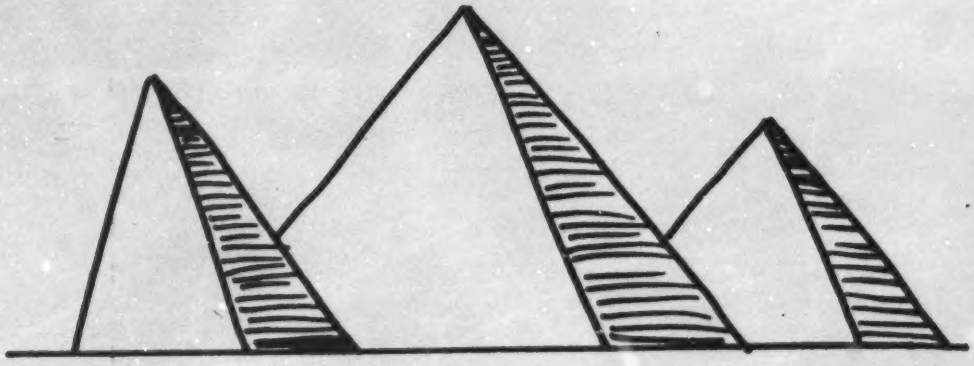
A VERY TALENTED PERSON

You need:
- -pencil
- -paper
- -reference book

Architects use a variety of skills in their work. Some skills they acquired in school, other skills come naturally.

Divide your paper into two parts. Label one HEAD, the other HANDS. Think carefully of all the duties an architect performs from the studying of the location of the building site to the drawing of plans to the final completion of the building. Decide whether his duties take more head skills (math, reading, etc.) or hand skills (drawing, making models, picking out materials). Place each of the skills necessary to an architect under one of the columns, either HEAD or HANDS. Place a ✓ next to the skills you are now learning.

THE PYRAMIDS



Please collect:

-paper

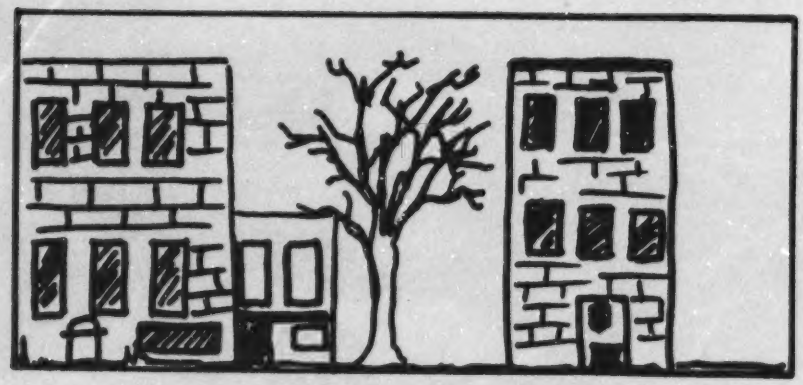
-pencil

-reference materials

The ancient Egyptians hoped to build tombs and temples to last for eternity. When they died, all the things they would need in the next life would be with them inside the tomb.

By exploring these large tombs, people today have found out many interesting facts about the way the ancient Egyptians lived.

Read a book from your school or classroom library or check your encyclopedia under PYRAMIDS. Write a short report on The Pyramids. Tell some interesting facts you learned about the life of the ancient Egyptians.



OLD IS BEAUTIFUL

You will need:

-paper with a cover

-pencil

-magazines

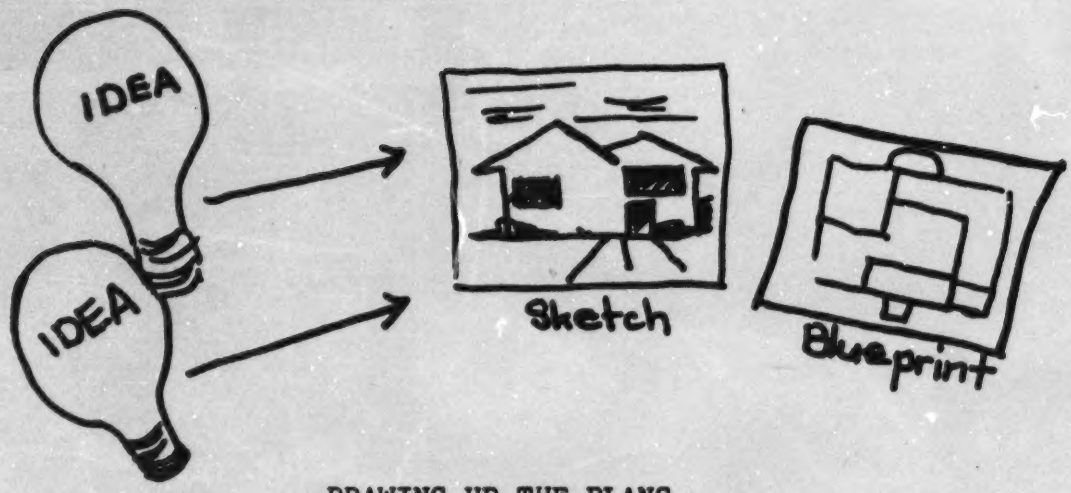
-telephone
or
envelope with stamp

In many cities, there is an organization dedicated to preserving our heritage. These people enjoy saving bits and pieces of our past to show what it was like to live in our community 100 - 200 years ago.

One of the main interests of these organizations is to preserve old, interesting buildings which reflect the history of our past. Many of these old buildings are renovated to their past elegance for all to see and enjoy.

Contact your local organization and find out about the houses and/or buildings they have saved. Write a report telling why some of these buildings were saved. Look through your magazines and cut out a picture of an old building or house that you are glad was saved. Paste this picture on the cover of your report. Share your report with the class.

In Bakersfield contact:
Pioneer Village, 861-2132



DRAWING UP THE PLANS

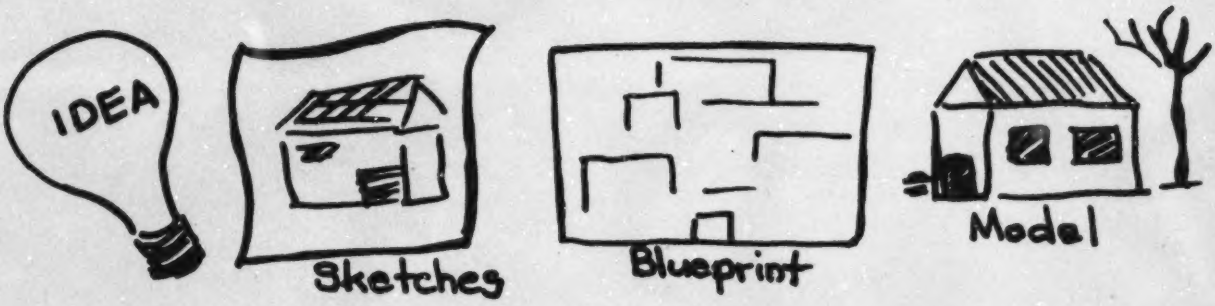
You need:

- -pencil
- -graph paper, 8 x 11 inches
- -ruler, compass, protractor

After the client and architect have discussed their ideas and needs, and decided on the sketches they like the best, the architect sits down to very carefully draw the details of the building.

This drawing must be perfectly accurate, because it is the blueprint. From the blueprint, the cement layers, carpenters, electricians, plumbers and all the other craftsmen receive the information they need to build their part of the building. If there is a mistake in the blueprint there might be a mistake in the construction of the building, and that would be very disappointing, dangerous and expensive.

On your graph paper draw the plans of a dog house you would like to own. Make each square equal one foot. Be very careful, you may want to use this "blueprint" for the next task card.



THE STAGES OF BUILDING A HOUSE

You need:

- -pencil
- -scissors
- -glue
- -cardboard
- -paint
- -blueprint from task card 11.

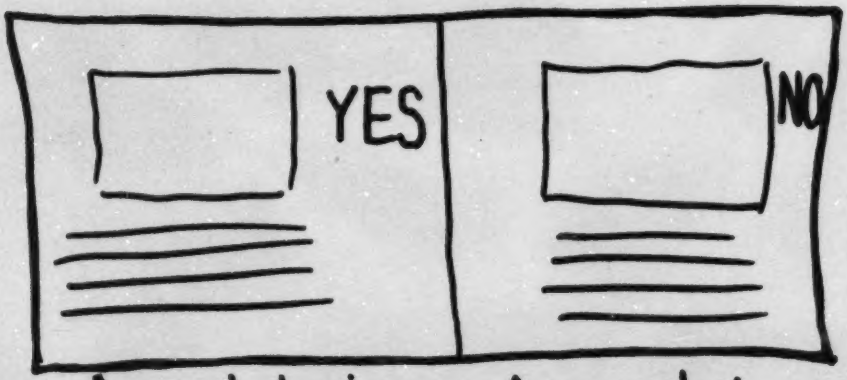
Before a house (or any other building) can actually be built, there are a number of stages the architect must go through.

Following his original idea, the architect makes a number of drawings or sketches to see what he/she likes best. After discussing the needs of the client and including some ideas by the architect, a very detailed plan called a blueprint is drawn up.

After the blueprint is checked very carefully to see if all the ideas and needs of the client and architect are included, and that there are no mistakes, a tiny model of the building is made so that the client can see exactly what his house or building will look like.

Construct a model from your small blueprint. Be very careful to cut the pieces the same size as indicated by the blueprint. Glue your pieces together and paint your building.

Place it on the classroom display table for all to see.



A good design — A poor design

Please have:

-magazines, newspapers

-scissors

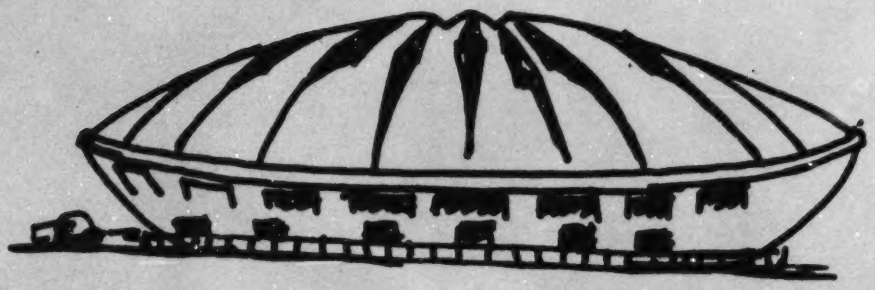
-paste

-pencil

-manila paper, 12 x 18 manila paper

Fold your paper in half. Look through your magazines. Choose two pictures. One should be a building that you like. The other one that you dislike. Paste one picture on each side of your paper. Under each picture, write the things you like or dislike about the building and why.

GEODESIC DOME

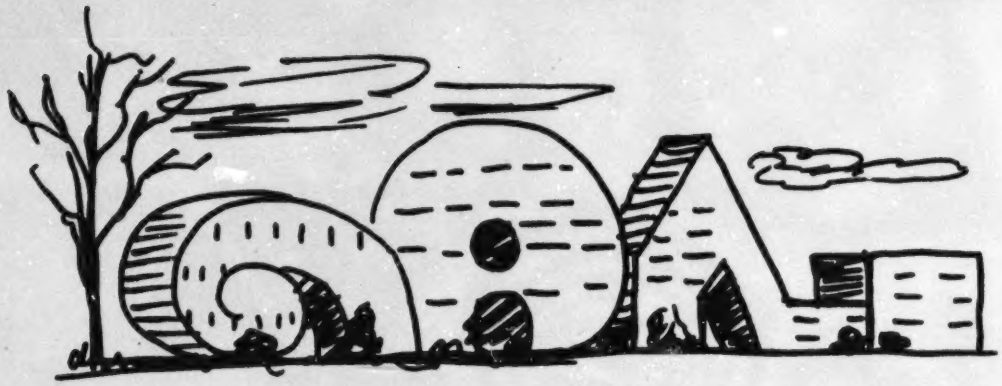


You will need:

- -paper
- -pencil
- -encyclopedia
  or
  book: How and Why Wonder Book of Buildings
  or
  From Stones to Skyscrapers

As we have learned, architectural design has not changed much in hundreds of years. A bright scientist named Richard Buckminister-Fuller decided to build a structure that would cover a large open space with no interior supports. He called his new structure the Geodesic Dome.

Look up Buckminister-Fuller in your encyclopedia or the How and Why Book. Find out how he made his dome. Write a paragraph telling how a geodesic dome is built and draw a picture of it to include in your scrapbook.



Please collect:

-paper

-pencil

DESIGNING A BETTER TOMORROW

Between now and the year 2,000, we must build a second United States - our growing population, the increasing age of existing buildings and our changing technology will create this demand in increased construction. This problem presents a terrific challenge to environmental design architects. These professionals are concerned with whole neighborhoods, shopping centers and office complexes. The architect must also consider the privacy, quiet, beauty, convenience and security people require.

Pretend it is the year 2000 and you are helping to plan an apartment building. Write a report describing what things you feel are important to be included in your building. Consider the changes in technology that will occur by then. Will you feel a garage is important? Windows? Garbage disposal? What facilities will you want in your building? Grocery store? Cleaners? Tennis courts? Movie theatres? Banks?

Consider carefully what you think would be important. Give reasons for your choices in the report.

HOW IMPORTANT IS OUR ENVIRONMENT TO YOU?

Have handy:

-a copy of this task card

-pencil

-friend

We must soon make choices about the styles of living we have become accustomed to since we are finding that the making of our modern conveniences are adversely affecting our environment. Take this quiz to see which choices you prefer. After completing the quiz, compare your answers with a friend. Talk over the choices you disagree on. Find out each other's reasons. Circle choices.

1. Would you rather:
   a. have windows in your house?
   b. have no windows but air conditioning and continual lighting?

2. Would you rather:
   a. have a garbage disposal in your kitchen?
   b. have a garbage chute nearby to recycle your garbage?

3. Would you rather:
   a. have trees surrounding your home?
   b. have a recreational complex with tennis courts, pool and children's playground?

4. Would you rather:
   a. have a garage and car?
   b. use public transportation and use garage space for additional homes?

5. Would you arther have your home heated by:
   a. solar energy?
   b. gas?

6. Would you rather have:
   a. a park and playground next door to your home?
   b. a shopping center next door to your home?

FIND THE WORDS

1	2	3	4	5	6	7	8	9	10	11	12
2	S	U	N	M	U	L	O	C	F	H	B
3	C	O	R	B	E	L		O	Y	K	I
4	M	A	P	C	L	I	E	N	T	N	U
5	N	R	G	B	E	A	M	T	U	A	E
6	T	C	E	T	I	H	C	R	A	L	P
7	O	H	O	L	G	Z		A	E	P	R
8	P	S	D	U	R	E	Y	C	B	R	I
9	L	X	E	A	O	R	M	T	X	O	N
10	A	T	S	V	M	T	S	O	P	O	T
11	N	G	I	S	E	D	M	R	D	L	Z
12	Y	W	C	T	H	G	I	R	W	F	P

SUN
GEODESIC
DESIGN
BEAUTY
ROME
PLAN
VAULT
BEAM
CONTRACTOR
ARCHITECT
FLOOR PLAN
CORBEL
POST
DOME
CLIENT
BLUEPRINT
COLUMN
ARCH
WRIGHT